

# **McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS**

**Sixth  
Edition**

**McGraw-Hill**

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EXHIBIT B  
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**On the cover: Representation of a fullerene molecule with a noble gas atom trapped inside. At the Permian-Triassic sedimentary boundary the noble gases helium and argon have been found trapped inside fullerenes. They exhibit isotope ratios quite similar to those found in meteorites, suggesting that a fireball meteorite or asteroid exploded when it hit the Earth, causing major changes in the environment. (Image copyright © Dr. Luann Becker. Reproduced with permission.)**

Over the six editions of the Dictionary, material has been drawn from the following references: G. M. Garrity et al., *Taxonomic Outline of the Prokaryotes*, Release 2, Springer-Verlag, January 2002; D. W. Linzey, *Vertebrate Biology*, McGraw-Hill, 2001; J. A. Pechenik, *Biology of the Invertebrates*, 4th ed., McGraw-Hill, 2000; U.S. Air Force Glossary of Standardized Terms, AF Manual 11-1, vol. 1, 1972; F. Casey, ed., *Compilation of Terms in Information Sciences Technology*, Federal Council for Science and Technology, 1970; *Communication-Electronics Terminology*, AF Manual 11-1, vol. 3, 1970; P. W. Thrush, comp. and ed., *A Dictionary of Mining, Mineral, and Related Terms*, Bureau of Mines, 1968; *A DOD Glossary of Mapping, Charting and Geodesic Terms*, Department of Defense, 1967; J. M. Gilliland, *Solar-Terrestrial Physics: A Glossary of Terms and Abbreviations*, Royal Aircraft Establishment Technical Report 67158, 1967; W. H. Allen, ed., *Dictionary of Technical Terms for Aerospace Use*, National Aeronautics and Space Administration, 1965; *Glossary of Staff Terminology*, Office of Aerospace Research, U.S. Air Force, 1963; *Naval Dictionary of Electronic, Technical, and Imperative Terms*, Bureau of Naval Personnel, 1962; R. E. Huschke, *Glossary of Meteorology*, American Meteorological Society, 1959; *ADP Glossary*, Department of the Navy, NAVSO P-3097; *Glossary of Air Traffic Control Terms*, Federal Aviation Agency; *A Glossary of Range Terminology*, White Sands Missile Range, New Mexico, National Bureau of Standards, AD 467-424; *Nuclear Terms: A Glossary*, 2d ed., Atomic Energy Commission.

### **McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS, Sixth Edition**

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element's equivalent weight. Abbreviated meq. { 'mil-ē-  
'lāiv-ə-lout }

mill See tonne. { 'mil'yā }

millifarad [ELEC] A unit of capacitance equal to one-thou-  
sandth of a farad. Abbreviated mF. { 'mil-ē-far-əd }

milligal [MECH] A unit of acceleration commonly used in  
geologic measurements, equal to  $10^{-3}$  galileo, or  $10^{-5}$  meter  
per second per second. Abbreviated mGal. { 'mil-ə-gal }

milligauss [ELECTROMAG] A unit of magnetic flux density  
equal to one-thousandth of a gauss. Abbreviated mG.  
{ 'mil-ə-gaus }

milligram [MECH] A unit of mass equal to one-thousandth  
of a gram. Abbreviated mg. { 'mil-ə-gram }

milligram-hour [NUCLEO] A unit of radiation dose, equal to  
the radiation emitted by a source with an equivalent radium  
content of 1 milligram for a period of 1 hour. Abbreviated  
mgh. { 'mil-ə-gram-əur }

millihenry [ELECTROMAG] A unit of inductance equal to  
one-thousandth of a henry. Abbreviated mH. { 'mil-ə-hen-  
-ə }

millihertz [PHYS] A unit of frequency equal to one-thou-  
sandth of a hertz. Abbreviated mHz. Also known as millicy-  
cle (mc). { 'mil-ə-herts }

milling See millimeter of mercury.

milli-inch See mil. { 'mil-ē,inch }

milli-k [NUCLEO] A unit of reactivity; the reactivity of a reac-  
tor in milli-k is equal to  $1000(k - 1)$ , where  $k$  is the effective  
multiplication factor. { 'mil-ē,kā }

millikan meter [ELECTR] An integrating ionization chamber  
in which a gold-leaf electroscope is charged a known amount  
and ionizing events reduce this charge, so that the resulting  
angle through which the gold leaf is repelled at any given time  
indicates the number of ionizing events that have occurred.  
{ 'mil-ə-kon,mēd-ər }

millikan oil-drop experiment [ATOM PHYS] A method of  
determining the charge on an electron, in which one measures  
the terminal velocities of rise and fall of oil droplets in an  
electric field after the droplets have picked up charge from  
ionization in the surrounding gas produced by an x-ray beam.  
{ 'mil-ə-kon 'oil,drāp ik,sper-əm-ənt }

milliliter [MECH] A unit of volume equal to  $10^{-3}$  liter or  $10^{-6}$   
cubic meter. Abbreviated ml. Also known as mil. { 'mil-  
-ə,lit-ər }

milli-mass-unit [PHYS] One-thousandth of an atomic mass  
unit. Abbreviated mmu. { 'mil-ə 'mas 'yü-nət }

millimeter [MECH] A unit of length equal to one-thousandth  
of a meter. Abbreviated mm. Also known as metric line;  
metric. { 'mil-ə,mēd-ər }

millimeter of mercury [MECH] A unit of pressure, equal to  
the pressure exerted by a column of mercury 1 millimeter high  
with a density of 13.5951 grams per cubic centimeter under  
the standard acceleration of gravity; equal to 133.322387415  
pascals; it differs from the torr by less than 1 part in 7,000,000.  
Abbreviated mmHg. Also known as millihg. { 'mil-ə,mēd-  
-ər əv 'mör-kyə-rē }

millimeter of water [MECH] A unit of pressure, equal to the  
pressure exerted by a column of water 1 millimeter high with  
a density of 1 gram per cubic centimeter under the standard  
acceleration of gravity; equal to 9.80665 pascals. Abbreviated  
mmH<sub>2</sub>O. { 'mil-ə,mēd-ər əv 'wödər }

millimeter wave [ELECTROMAG] An electromagnetic wave  
having a wavelength between 1 millimeter and 1 centimeter,  
corresponding to frequencies between 30 and 300 gigahertz.  
Also known as millimetric wave. { 'mil-ə,mēd-ər 'wāv }

millimetric wave See millimeter wave. { 'mil-ə'mē-trik 'wāv }

milli-micro See nano-. { 'mil-ə,mī-krō }

millimicron See nanometer. { 'mil-ə,mī-krōn }

milling [MECH ENG] Mechanical treatment of materials to  
produce a powder, to change the size or shape of metal powder  
particles, or to coat one powder mixture with another. [MIN  
ENG] A combination of open-cut and underground mining,  
wherein the ore is mined in open cut and handled underground.

milling

milling cutter [DES ENG] A rotary tool-steel cutting tool with  
peripheral teeth, used in a milling machine to remove material  
from the workpiece through the relative motion of workpiece  
and cutter. { 'mil-ij,kəd-ər }

milling machine [MECH ENG] A machine for the removal of  
metal by feeding a workpiece through the periphery of a rotating  
circular cutter. Also known as miller. { 'mil-ij mə,shēn }

milling ore See second-class ore. { 'mil-ij,ör }

milling planer [MECH ENG] A planer that uses a rotary cutter  
rather than single-point tools. { 'mil-ij,plān-ər }

milling system See chute system. { 'mil-ij,sis-təm }

Millington reverberation formula [ACOUS] A formula that  
states that the reverberation time of a chamber in seconds is  
0.05 times its volume in cubic feet, divided by the sum over  
the surfaces of the chamber of the product of the surface's area  
in square feet by the natural logarithm of 1 minus its absorption  
coefficient. { 'mil-ij-tən ri,vər-bə'rā-shən,för-myə-lə }

milling width [MIN ENG] Width of lode designated for treat-  
ment in the mill, as calculated with regard to daily tonnage.  
{ 'mil-ij,width }

million [MATH] The number  $10^6$ , or 1,000,000. { 'mil-  
-yən }

million electronvolts See megaelectronvolt. { 'mil-yən  
i'lek,trän,völtz }

million floating-point operations per second [COMPUT SCI]  
A unit used to measure the processing speed or throughput  
of supercomputers or array processors. Abbreviated Mflop.  
{ 'mil-yən 'flōd-ij 'pōint,äp-ə'rā-shənz pər 'sek-ənd }

million instructions per second [COMPUT SCI] A unit used  
to measure the speed at which a computer's central processing  
unit can process instructions. Abbreviated MIPS. { 'mil-  
-yən in'strək-shənz pər 'sek-ənd }

millipede [INV ZOO] The common name for members of the  
arthropod class Diplopoda. { 'mil-ə,pēd }

millipore filter [MICROBIO] A filter capable of ultrafine sep-  
aration, used for purification and analyses of fluids, among  
other applications. { 'mil-ə,pör,fil-tər }

millirad [NUCLEO] A unit of absorbed ionizing radiation  
dose equal to one-thousandth of a rad. Abbreviated mrad.  
{ 'mil-ə,rad }

milliroentgen [NUCLEO] A unit of radioactive dose of elec-  
tromagnetic radiation equal to one-thousandth of a roentgen.  
Abbreviated mr. { 'mī-ē-rent-gən }

millisecond [MECH] A unit of time equal to one-thousandth  
of a second. Abbreviated ms; msec. { 'mil-ə,sek-ənd }

millisecond delay cap [ENG] A delay cap with an extremely  
short (20-500 thousandths of a second) interval between pass-  
ing of current and explosion. Also known as short-delay deto-  
nator. { 'mil-ə,sek-ənd di,lā,kap }

millisecond pulsar See fast pulsar. { 'mil-ə,sek-ənd 'pəl-  
-sär }

millisite [MINERAL]  $(\text{Na,K})\text{CaAl}_6(\text{PO}_4)_4(\text{OH})_9 \cdot 3\text{H}_2\text{O}$  White  
mineral composed of a basic hydrous phosphate of sodium,  
potassium, calcium, and aluminum. { 'mil-ə,sīt }

millivolt [ELEC] A unit of potential difference or emf equal  
to one-thousandth of a volt. Abbreviated mV. { 'mil-ə,völt }

millivoltmeter [ELEC] A voltmeter whose scale is calibrated  
to indicate voltage values in millivolts. { 'mil-ə,völt,mēdər }

milliwatt [MECH] A unit of power equal to one-thousandth  
of a watt. Abbreviated mW. { 'mil-ə,wät }

mill length See random length. { 'mil,lēŋkth }

Millon's reagent [CHEM] Reagent used to test for proteins;  
made by dissolving mercury in nitric acid, diluting, then  
decanting the liquid from the precipitate. { mē'lonz re,ä-jənt }

mill ore [MIN ENG] An ore that must be given some prelimi-  
nary treatment before a marketable grade or a grade suitable  
for further treatment can be obtained. { 'mil,ör }

millrace [CIV ENG] A canal filled with water that flows to  
and from a waterwheel acting as the power supply for a  
mill. { 'mil,rās }

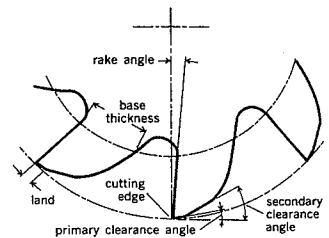
mill run [MIN ENG] 1. A given quantity of ore tested for  
its quality by actual milling. 2. The yield of such a test.  
{ 'mil,rən }

mill scale [MET] A surface layer of ferric oxide ( $\text{Fe}_3\text{O}_4$ ) that  
forms on steel or iron during hot rolling. { 'mil,skāl }

Mills cross [ELECTROMAG] An antenna array that consists  
of two antennas oriented perpendicular to each other and that  
produces a narrow pencil beam. { 'milz 'krōs }

Mills-Crowe process [MIN ENG] Method of regeneration of

# MILLING CUTTER



Typical milling cutter teeth.